April 18, 1984

CD-84-6 (LD)

Dear Light-Duty Manufacturer:

Subject: 1985 Model Year Fuel Economy Options and Procedures

On April 6, 1984 EPA published a final rule implementing changes to the fuel economy labeling program (Ref: 49 FR 13832, "Revisions to Improve Fuel Economy Labeling and the Fuel Economy Data Base"). That final rule requires some program changes be implemented beginning in the 1985 model year and some changes be implemented beginning with the 1986 model year. In addition, many of the changes required beginning with the 1986 model year are optional for the 1985 model year. The purpose of this letter is to describe the requirements and options available for the 1985 model year.

Enclosed with this letter are the following documents designed to aid you in your 1985 model year program:

Enclosure 1, "New Requirements and Options for the 1985 Model Year Fuel Economy Program," outlines the regulatory changes that affect the 1985 model year and further explains the options made available by the rulemaking.

Enclosure 2, "1985 Fuel Economy Supplementary Information," contains the fuel cost, Gas Guzzler, and fuel economy range information normally sent out with each manufacturer's first labels.

Enclosure 3, "Timetable," contains the timetable for inclusion of label values in the 1985 model year Gas Mileage Guide.

Enclosure 4, "Fuel Economy Data Input Instructions," specifies new data reporting procedures resulting from the rulemaking, and includes new fuel economy (FE) information forms and formats, and instructions for their use. The old formats may be used until April 30, 1984. After that date EPA computer programs will not accept the old formatted FE information.

Manufacturers may use the new forms prior to April 30, however, these data will not-be processed until April 30. EPA will also begin to accept FE data electronically and automatically issue receipts on that date (as described in Enclosure 2).

As explained in the preamble to the FE regulations, all FE labels previously approved using the old format and regulations must be recalculated using the new format and regulations by May 7, 1984.

Please direct any further questions on these subjects to your certification team.

Sincerely yours,

Robert E. Maxwell, Director
Certification Division
Office of Mobile Sources

Enclosures

Enclosure 1

New Requirements and Options for the 1985 Model Year Fuel Economy Program

The following table summarizes the regulatory changes that are required, optional, or not applicable in the 1985 model year. More detailed discussions of each of the items follow the table.

Required for 1985	Optional for 1985	1986 and Later Only
In-Use Label Adjustments	Standard Label Format	Adjustment for
City/Hwy Labels	Minimum Data for:	High Odometer Test
Transmission Class Separation	Label Values	Vehicles
Reduced Reporting	Label Self-Approval	
	Unique Labels	
	Label Updating	

PCAFE Elimination

Required Items for 1985

1. Adjusted City/Highway Labels

As required in §600.308-85(b), manufacturers are required to use fuel economy labels containing city and highway estimates that are adjusted in accordance with §600.209-85. Labels also must contain two additional statements (§600.307-85 (b)(7) and (8)) related to the adjusted values. Because of the short leadtime to include these new items on 1985 labels, EPA has not imposed specific additional formating requirements for 1985. Formating options are discussed below under "Optional Items for 1985."

Early introduction 1985 model vehicles that are produced and labeled before the effective date of the regulations (May 7, 1984) need not be relabeled. However, all vehicles produced after the effective date of the regulations must bear fuel economy labels meeting the new 1985 model year requirements (i.e., adjusted city/highway values and the two additional statements). Therefore, 1985 model types calculated under the old 1985 rules must be resubmitted for recalculation using the revised data procedures. Manufacturers may implement the new labels any time before the effective date.

2. Transmission Class Separation

As described in the final rule, transmission classes will be separated based on drive system (e.g., front versus rear), lockup torque converter usage, and automatic transmission overdrive usage. All labels issued after the effective date of the regulations must reflect these separations.

3. Reduced Reporting

Manufacturers no longer need to submit certain records concerning test vehicle calibrations, maintenance, and interior volume calculations. Specific reporting exclusions are contained in §600.006-85(b)(2). Note that the deletion of the requirement to report interior volume. calculations was

inadvertently excluded from the final rule. The items under §600.315-82(h) are now intended to be retained by the manufacturer. A technical amendment will be issued to correct this oversight.

Optional Items for 1985

1. Label Format

The final rule establishes a permanent standard label format that is required beginning with the 1986 model year. In addition to greatly improving the appearance and utility of the label, this standard format allows manufacturers to issue labels without prior EPA review and approval of the format. Manufacturers may, at their option, use the new format for the 1985 model year vehicles. If this option is taken, prior EPA approval of the 1985 format will be unnecessary; however, manufacturers should notify EPA of their intent to use the new (1986) format prior to implementation. EPA has made available camera-ready copies of the new format for manufacturers. These copies can be obtained by contacting Judy Carmickle of the Certification Division at (313) 668-4440.

EPA has made no changes to the basic label requirements for the 1985 model year, except for the additional requirements to include adjusted city and highway estimates, and two additional statements required in §600.307(b)(7) and (8). Thus, manufacturers may modify their previous format to accommodate the new information. Use of any format other than the standard format required beginning with 1986 requires EPA approval in advance as in previous years. However, EPA encourages the use of the new standard format. Manufacturers may convert to this new format at any time during the 1985 model year, but should notify EPA before implementation.

EPA intends to allow significant latitude in approving 1985 model year Label formats, considering the short lead time. The regulations are structured to minimize the changes that would have to be made to previous label designs. Generally, any approved 1984 model year format modified to accommodate the city/highway values and the two new statements will be considered acceptable. Manufacturers may be able to conserve some

space by using the statements incorporated on the new 1986 format (Ref: §600.307-85(d)). Along with meeting the size requirements of §600-307-85(c), the estimated city and highway mpg's should be of about equal size, and clearly labeled as city and highway.

2. Minimum Data Requirements for Label Values

Beginning with the 1986 model year, label values must be represented by at least the highest projected sales subconfiguration within the highest projected sales configuration for each base level (Ref: §600.010-86(c)). For the 1985 model year, manufacturers may voluntarily supply data from these vehicles where not otherwise required for 1985. There is no requirement for prior notification or approval, and manufacturers are encouraged to supply these minimum data to enhance the accuracy of the labels. Note that as described in the next optional item, the new minimum data requirements must be met if the manufacturer elects to "self-approve" label values for 1985 vehicles.

3. Self-Approval of Label Values

Beginning with the 1986 model year, prior EPA approval of label values is no longer required. Manufacturers may optionally "self-approve" label values for 1985 model year vehicles. Section III.F (FR 13837) of the preamble to the final rule states that manufacturers may optionally self -approve label values for 1985 vehicles " if they comply with the prerequisites for exercising this responsibility and obtain EPA's concurrence that they may do so." EPA's intended prerequisite for this option is that the manufacturers must adhere to the new minimum data requirements for labels as specified in §600.010-86(c). That is, manufacturers must test the highest projected sales subconfiguration within the highest projected sales configuration within each base level. Further, because of potential processing complications, manufacturers will only be allowed to self-approve labels on an "across the board" basis. Thus, at any time during the model year, a manufacturer may begin issuing all subsequent label values without prior EPA approval. From that time, EPA may audit label value calculations, and the relabeling jeopardy described

in §600-312-86(b)(3) will be in effect- All base levels within model types with self-approved labels must be represented by minimum test data required in §600.010-86(c). Additionally, manufacturers must obtain EPA approval prior to exercising this option. EPA has developed a computer program that collects and stores self-approved label values and issues a receipt and ranges when available. The data supplement to the certification application includes details of this process.

4. Unique Labels

The new regulations (§600.207-86(a)(2)) allow manufacturers to issue separate label values for vehicles within a model type. EPA anticipates that this option will be used to highlight certain fuel efficient subconfigurations. This may be done as long as the vehicles to be labeled separately bear a unique car line name that will appear on the vehicle. (Unique means that no other model type exists with that car line name in the manufacturer's product line.) Further, each subconfiguration being represented by the separate label must be represented by test data. This option is available beginning with the 1985 model year, and will remain a permanent option for subsequent model years exercising this option.

5. Label Updating

Beginning with the 1986 model year, manufacturers will be required to recalculate label values for model types affected by certain design changes during the model year (Ref: §600.314-86(b)). The design changes that will trigger a recalculation are listed in §600.507-86(a). If the resultant model type recalculations are 1.0 mpg or more lower than the existing city or highway model type values, the manufacturer must install revised labels on the applicable vehicles when the change is implemented. Manufacturers may relabel for fuel economy increases of 1.0 mpg or more at their option.

Manufacturers may optionally use label updating in the 1985 model year, however, EPA will not allow manufacturers to selectively exercise this option. Therefore, manufacturers may begin to use label updating at any time during the 1985 model year; however, once the commitment is made, the manufacturer must adhere to all of the requirements of §600.314-86 for the remainder of the model year. Manufacturers must notify EPA

of their intent to use label updating before the implementation of the first label update.

6. Elimination of Preliminary CAFE Calculations

Beginning with the 1986 model year, the preliminary CAFE calculation will no longer exist. In its place, the final CAFE data base must include data representing at least 90 percent of actual sales, in any order. For the 1985 model year, manufacturers have the option of submitting a preliminary CAFE in accordance with the current 1985 model year rules and policies, or they may elect not to submit a preliminary CAFE calculation and submit a final CAFE calculation (when due) that is represented by test data covering 90 percent of final sales in accordance with §600.010-86(d). Manufacturers should notify EPA of their intent to eliminate the preliminary CAFE submission for the 1985 model year. This notification may be submittted at any time before the preliminary CAFE is due.

Enclosure 2

1985 Fuel Economy Supplementary Information

1985 Fuel Economy Calculations

Fuel economy calculations include vehicle configuration, base level, and model type fuel economy calculations. The approved general label values and annual fuel costs are calculated for each model type. Fuel cost estimates for 1985 are based on 15,000 annual vehicle miles and a fuel cost of $1.25/gallon for regular unleaded gasoline, $1.35/gallon for premium unleaded gasoline, and $1.20/gallon for diesel fuel. The fuel cost will be calculated using the adjusted combined mpg (the .55/.45 weighting of the adjusted city and highway FE's, then rounded to a whole mpg).

1985 Gas Mileage Guide

Each of the labels you will receive contain a "1985 Fuel

Economy Guide" listing which includes the information that will appear in the 1985 Gas Mileage Guide. Please review this information and notify us of any errors within five days of receipt of your labels. If you do not respond, we will assume the information is correct. The data will then be available for public release and no further changes will be allowed.

Fuel Economy Ranges

The publication of the initial ranges as required by §600.314-77(d)(l) will occur at the same time the Guide is released for publication. These ranges shall be applied to all vehicles manufactured more than 15 days after the ranges are available [§600.306-81(b)].

Pursuant to §600.314-77(d)(2) we will publish an updated version of all the ranges early in February 1985. This corresponds to the historical date of the second edition of the Guide. All vehicles must be labeled with the updated ranges within 15 days.

Labels issued after release of the initial or updated ranges should include the latest available range of fuel economy for that class of vehicle. After the ranges are initially available, each label issued by EPA will contain a list of ranges for the comparable classes labeled. If the manufacturer has elected to approve its own label values, the computer issued receipt will contain the ranges. The receipt will be automatically generated for manufacturers electronically transmitting FE data; other manufacturers can pick up this receipt from your certification team representative after the FE data has been entered. Separate ranges of adjusted city and highway FE values will be given.

Gas Guzzler Tax

If, according to our calculations, one or more of your model types are subject to the Gas Guzzler Tax, those model types are noted by the word "Guzzler" in the engine description section of the enclosure entitled "1985 Fuel Economy Guide." This term will also appear in the Gas Mileage Guide and will reference an explanatory test.

The total amount of tax is determined by the Internal Revenue Service (IRS). The manufacturer is responsible to IRS for reporting and paying the Gas Guzzler Tax. The tax shown in the table below must be used on the label unless the manufacturer has been granted an alternate tax rate schedule. However, IRS may audit your records and make their own determination about your tax liability. If IRS determines a different tax rate after the model year, you will not be required to relabel unsold vehicles.

Use the following table to determine your tax liability for "Guzzler" model types.

MPG* is at least:	TAX
20.0 but < 21.0	$ 500
19.0 but < 20.0	$ 600
18.0 but < 19.0	$ 800
17.0 but < 18.0	$1,000
16.0 but < 17.0	$1,200
15.0 but < 16.0	$1,500
14.0 but < 15.0	$1,800
13.0 but < 14.0	$2,200
< 13.0	$2,650

(*Combined model type fuel economy)

NOTE: Approval of a fuel economy label is conditional upon exhaust emission certification and does not indicate the status of the certification process. If EPA disapproves the test conditions and/or procedures used to generate fuel economy information, the label is invalid from the outset.

Our current practice is to treat fuel economy information confidential prior to publication of the Gas Mileage Guide.

Timetable

This enclosure is the timetable for including data in the 1985 Gas Mileage Guide and for the calculation and release of updated fuel economy ranges:

A. Gas Mileage Guide

	Task	Significant Dates	Responsibility
I.	Submit fuel economy data : vehicle package for those vehicle configurations intended to be included in the calculation of model type fuel economy values for the Guide.	July 18 :	Manufacturer
II.	Complete all fuel economy testing pertaining to general label values for all model types to be included in the Guide.	August 1	Manufacturer
III.	Submit to EPA requests for calculation of general label values for EPA approved model types to be included in the Guide.	August 8	Manufacturer
IV.	Complete emission certification requirements for all model types to be included in the Guide.	August 20	Manufacturer
V.	Complete EPA approval or notify EPA of self-approval of all general	August 20	EPA/Manufacturer

label fuel economy values for all model types to be included in the Guide.

	Task	Significant Dates	Responsibility
VI.	Compile a list (for each manufacturer) of-descriptions, fuel economy values, etc., of all model types to be included in the Guide and transmit to manufacturers for their review.	August 20	EPA
VII.	Complete review of all information provided in (VI) above and notify EPA of necessary corrections or concurrence.	August 30	Manufacturer

. Fuel Economy Ranges

	Task	Significant Dates	Responsibility
I.	Release to manufacturers the fuel economy ranges to be used on fuel economy labels.	August 31	EPA
II.	Ranges required to be included on labels as of this date.	September 16	Manufacturer

It is our understanding that DOE intends to publish only one edition of the Gas Mileage Guide. EPA will convey the necessary information to DOE on August 31, 1984.

Enclosure 4

Fuel Economy Data Input Instructions and Format

These instructions are being issued to explain the fuel economy (FE) forms and processes for the 1985 model year under the provisions of the new FE FRM and anticipating the revised general FE policies to be explained in Advisory Circular No. 83A.

This guideline includes instructions and formats for submitting general label and manufacturer's average information. Manufacturers are encouraged to provide complete and accurate submissions using the formats and instructions detailed in this guideline. Preferably the information should be submitted on key punched data cards or electronically transferred.

Prior to the submission or self-calculation of a general label or manufacturers average request the manufacturer must have completed the following --
items:

- Breakdown of product line into basic engines
- Determination of car lines
- Classification of car lines
- Label format approval
- Submit any necessary engine code equivalency requests
- Submit any necessary data substitution requests
- Complete testing of all associated test vehicles
- Complete certification of the associated family
- Assure that all EPA computer information is correct

Data Input Instructions and Format

The next several pages give instructions regarding the format and content of general label and manufacturer's average information submittals. This information should be submitted on key punched computer cards. If that is not possible, the information should be written on the format pages provided in Attachments I, II, and III.

The data cards for each index (instructions for numbering indexes are included later in this guideline) should be ordered having the CAFE sales input card,

(Card FS) (if a CAFE submittal), then the Card 1, Card 2's (if a self-calculation), Card 4's, Card 5's, and Card 6's in that order for each index submitted.

Total Sales Card -Corporate Average FE

1 -2	CARD IDENT	"FS" as card identifier.
3 -4	MODEL YEAR	Enter applicable FE model year.
5 -7	MFR CODE	Enter 3-digit mfr code from the back of the Vehicle Information Data Sheet.
8	COMPLIANCE CATEGORY	1 for domestic passenger cars, 2 for Import Passenger, 3 for Domestic 2-wheel drive, 4 for Import 2-wheel drive, 5 for Domestic 4-wheel drive, 6 for Import 4-wheel drive, 7 for Domestic Combined Light Duty truck, 8 for Import Combined Light Duty truck.
9 -15	SALES	Total sales for the compliance category. Left justify

-CAFE Total Sales Card -

Card 1 - Basic Engine Information

Column Number	Field Title	Instructions
1 -16	BASIC ENGINE NAME	Enter the basic engine name. Left justify.
18 -20	MFR - (Manufacturer Code)	Enter the appropriate three-digit manufacturer code listed on the back of the VI Sheet. Right justify.
22	COMP CAT (Compliance Category)	(For CAFE only), Enter: 1 for domestic passenger cars, 2 for Import Passenger, 3 for Domestic 2-wheel drive, 4 for Import 2-wheel drive, 5 for Domestic 4-wheel drive, 6 for Import 4-wheel drive, 7 for Domestic Combined Light Duty truck 8 for Import Combined Light Duty truck
24	CALC TYPE (Calculation Type)	(For CAFE only): "P" for preliminary and "F" for final calculation.
25	CAL/FED (California or Federal)	"C" for sales in California "F" for 49-state sales
26	RECALC	(For GENERAL LABEL only): " " or "N" for new data, "1" recalc due to addition of base level, "2" recalc due to addition of axle ratio greater than the largest tested in previous index,

		"3" recalc due to addition of road load horsepower 10% higher than the highest (tested or untested) in previous index, "4" recalc due to addition of a higher equivalent test weight
27	RELABEL OPT	(For GENERAL LABEL only): "y" when relabeling is desired if FE value increases by 1.0 MPG. "N" if relabeling is not wanted
28	SELF CALC	(For GENERAL LABEL only) Enter: "Y" if the label values are self-approved and the card 2's representing manufacturer's calculations are to follow, "N" if the labels are to be issued by EPA.(For 1985 model year only)
29 -31	APP STD (Applicable Standard)	(For CAFE only) Enter the CAFE standard for the mfr and compliance category.

-Card 1 -

33 -40	INDEX NUMBER	
	Vehicle Type (cols 33 -36)	"LDV ", " LDV", "LDT ", " LDT", "LDDV", OR "LDDT"
	Number (cols 38 -40)	Right justify. Enter 1 through 99 to uniquely identify a specific set of data under a basic engine. Manufacturers with MFR codes 10 through 40 may use numbers up to 999.
42 -47	RELEASE DATE	(For GENERAL LABEL only): Enter the date when the label information may be released to the public.
50 -59	BASIC ENGINE DESCRIPTOR #1	When engine size and number of cylinders are not an adequate descrption of an engine, use appropriate descriptors: e.g., ROTARY, DIESEL, etc., Enclose the descriptors with parentheses for visual clarity. Left justify.

60 -69	BASIC ENGINE DESCRIPTOR #2	Same as the descriptor 1 above.
70 79	BASIC ENGINE DESCRIPTOR #3	Same as the descriptor 1 above.
80	Card type	Enter '1'.

-Card 1 -

Card 2 - Self-approved FE information

Column Number	Field Title	Instructions
1 -5	CARLINE	Enter 5-digit carline code from Car/Truck Line information system.

7 -9	CID	Engine displacement in cubic inches. Right justify.
10 -13	OPT DISP (Optional Displacement)	Engine displacement to be used as the advertised displacement if other than CID. Right justify.
	UNITS	Enter "C" for cubic centimeters or "L" for liter for optional displacement
16 -17	TRANS	Enter C4, M3, B3 (MODEL WITH BOTH C4 AND M3), C5, M4, B4 (MODEL WITH BOTH C5 AND M4), M5, A3, L3, A4, L4, S2, S3, S4, or S5 for transmission installed.
19	DRIVE SYS	Enter drive system code: 4 = 4-wheel drive F = 2-wheel drive, Front R = 2-wheel drive, Rear
21	O/D	Enter overdrive code: 1 = no gear ratio < 1 2 = Top gear ratio < 1 3 = Electrically operated O/D 4 = Computer controlled automatic electronic overdrive 5 = Computer controlled automatic electronic overdrive with lock-out switch
23	SIL	State whether equipped with shift indicator light: Y = Yes N = No
24	ENG MGMT	Indicate whether equipped with engine management system: Y = Yes N = No E = Yes, but with lock-out feature
25	# MODES	Enter number of modes if a multi-mode system
27	VAR LOCKUP PT	Enter number of lockup rpm ranges: V = Continuously variable 1 -9 = number of discrete lockup rpm ranges

-Card 2 -

28	DECLUTCHING/ FREEWHEELING	Specify whether equipped with declutching/freewheeling mechanism other than part of an engine management system: Y = Yes N = No L = Yes, but with lock-out feature
35 -40	UNROUNDED UNADJUSTED CITY FE	Enter city FE to 4 places to the right of decimal point.
42 -47	UNROUNDED UNADJUSTED HWY FE	Enter highway FE to 4 places to the right of decimal point.
49 -54	UNROUNDED UNADJUSTED COMB FE	Enter combined FE to 4 places to the right of decimal point.
56 -57	GUIDE CTY	Enter city FE rounded to whole number. Right justify.
59 -60	GUIDE HWY	Enter highway FE rounded to whole number. Right justify.
62 -63	GUIDE CMB	Enter combined FE rounded to whole number. Right justify.
65 -68	ANNUAL FUEL $	Enter annual fuel cost based on rounded combined fuel economy and 15,000 miles of driving per year. Right justify.
70 -77	APPROVAL DATE	Date when the self-approval was made
80	Card type	Enter "2"

-Card 2 -

Card 4 - Test Data Information

Column Number	Field Title	Instructions
1 -3	DVC (Data-Vehicle Code) -	Enter a unique number (1 -49) within a basic engine for a group of tests representing a configuration. Right justify.
4 -19	VEHICLE ID (Vehicle Identification)	Enter vehicle identification as it exists in the EPA data base. Left justify.
20	LINK	Enter any alphanumeric code if the card is continuation from the previous card, i.e., same VID and version. The initial and all the continuation cards should have a same code.
21 -26	CITY TEST#	Right justify. Enter the EPA assigned test number associated with all data approved by EPA for use in fuel economy calculations. NOTE: If a specific test vehicle is tested under several different conditions(e.g. tests with different tires, tests to represent M-5 and M-4 transmissions, tests at different power absorption unit settings, etc.,), use different card 4's.
28 -33	CITY TEST#	Same as above
35 -40	CITY TEST#	Same as above
42	AVE CODE CITY	Enter an alphanumeric code to a

		group of card 4's whose tests are to be weighted and averaged into a single fuel economy value.
44 -46	CITY WEIGHTING	If the "AVE CODE CITY" is entered, enter the weighting factor to be applied to the city fuel economy(ies) on this record. NOTE: The weighting factors of vehicles averaged together must sum to 1.00.
50 -55	HWY TEST#	Right justify. Enter the highway test number. See instruction for 'CITY TEST#'.
57 -62	HWY TEST#	Same as above
64 -69	HWY TEST#	Same as above
71	AVE CODE HWY	See instruction for "AVE CODE CITY".
73 -75	HWY WEIGHTING	See instructions for "CITY WEIGHTING".

-Card 4 -

77	SUPP CODE	Enter a numeric code here for data suppression: - 2 = If being suppressed for confidentiality 5 = Police vehicle 9 = For cards previously used in another index but used here to support calculation for new model type introduction. Or for cards previously used but used again as a data substitution.
78 -79	RLC	Enter a unique number (1 -49) to identify a RLC/ETW (road load horsepower/equivalent test weight) grouping. This number should be unique within a DVC which is entered in columns 1 -3. Right justify.
80	Card type	Enter "4".

-Card 4 -

Card 5 - Sales Data Information

Column Number	Field Title	Instructions
Heading	MANUFACTURER	Enter the name of the manufacturer submitting the request, not the company that will market the vehicles. This information does not
-	-	-

		apply to data to be submitted electronically or in 80-column punched card decks.
1 -5	CARLINE	Enter 5-digit carline code from Car/Truck Line information system.
7 -9	CID	Engine displacement in cubic inches. Right justify.
10 -13	OPT DISP (Optional displacement)	Engine displacement to be used as the advertised displacement if other than CID. Right justify.
14	UNITS	Enter. "C" for cubic centimeters or "L" for liter for optional displacement.
16 -17	TRANS	Enter C4, M3, C5, M4, M5, A3, L3, A4, L4, S2, 53, S4 OR S5 for transmission installed.
19 -20	TRANS LINK CODE	Enter a numeric code that would point to the "TRANS LINK CODE" on card 6 to describe the transmission configuration. Right justify.
22 -25	IWT	Enter inertia weight class in pounds. Right justify.
26 -29	ETW	Enter equivalent test weight within the inertia weight class. Right justify.
31 -44	ENGINE CODE	Enter engine code. Left justify.
45 -47	AXLE RATIO	Enter the axle ratio, rounded to two decimal places.
49 -51	RLHP	Enter road load horsepower from the application for certification.
53 -58	SALES	Enter sales projections (actual sales for CAFE) for this car line/vehicle configuration/equivalent test weight/ road load horsepower combination. Right justify.
60 -71	ENGINE FAMILY	Enter the engine family name for this carline/DVC/RLC combination. Left justify.

-Card 5 -

72	FUEL USAGE	Enter fuel type : "R" for regular unleaded, "p" for premium unleaded, "D" for diesel
73	ALT	Indicate the altitude of the area the car line/vehicle configuration/equivalent test weight/road load horsepower combination will be sold: "1" for low altitude only, "2" for high altitude only, "3" for all altitudes
74	SUPP CODE	Enter a suppression code if this model type is not to appear on FE GUIDE : "2" if being suppressed for confidentiality "5" if police vehicle "9" if used previously in another index
75 -77	DVC (Data-Vehicle Code)	Enter a unique number (001 -999) within a basic engine for a group of sales cards representing a configuration. Right justify.
78 -79	RLC	Enter a unique number (1 -99) to identify a RLC/ETW (road load horsepower/equivalent test weight) grouping. This number should be unique within a DVC which is entered in columns 1 -3. Right justify.
80	Card type	Enter "5".

-Card 5 -

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Card 6 - Transmission Information

Column Number	Field Title	Instructions
1 -2	TRANS LINK CODE	Enter a numeriC code (up to two digits) that would link this card 6 with transmission information to the card 5. Right justify.
4 -5	TRANS	Enter C4, M3, C5, M4, M5, A3, L3, A4, L4, S2, S3, S4 OR S5 for transmission installed.
7	DRIVE SYS	Enter drive system codes: 4 = for 4-wheel drive F = for 2-wheel drive, Front R = for 2-wheel drive, Rear
9	O/D	Enter overdrive code: 1 = no gear ratio < 1 2 -Top gear ratio < 1 3 -Electrically operated O/D 4 -Computer controlled automatic electronic overdrive 5 -Computer controlled automatic electronic overdrive with lock-out switch
11	SIL	State whether equipped with shift indicator light: Y = Yes N = No

12	ENG MGMT SYS	Indicate whether equipped with engine management system: Y = Yes N = No L -Yes, but with lock-out feature
13	# MODES	Enter number of modes if a multi-mode system
14	LOCKUP OVERRIDE	State whether equipped with Lockup over ride system: Y = Yes N = No
15	VAR LOCKUP PT	Enter number of lockup rpm ranges: V = Continuously variable 1 -9 = number of discrete lockup rpm ranges
16	DECLUTCHING/ FREEWHEELING	Specify whether equipped with declutching/freewheeling mechanism other than part of an engine management system. Y = Yes N = No L = Yes, but with lock-out feature
80	Card type	Enter "6" .

-Card 6 -

Indexes

Each basic engine is placed into a different index. The criteria for distinguishing basic engines is explained in Advisory Circular No. 81A. Modifications to the EPA computer program have been completed that allow two-wheel drive (AWD) and 4WD vehicles, front-wheel drive and rear-wheel drive vehicles, vehicles equipped' with electronic overdrive transmission, and shift indicator light equipped vehicles to be grouped into the same index.

Each index receives an index number. The index number is a three-digit number used to identify each unique data set used in fuel economy calculations. The fuel economy data retrieval and reporting programs all use the index number to identify the data set to be used and the report to be produced. This code is assigned by the manufacturer according to the general conventions outlined later in this guideline.

A different method of assigning the index number is used for GM, Ford,

Chrysler, and AMC than is used for the rest of the industry. This is because of the structure of the manufacturers' code designations.

Major Domestic Manufacturers' Light-Duty Vehicle Index Numbers:

LCV -NNN

	N	N	N
LDV - (For gas vehicles) or LDDV - (For diesel vehicles)	Displacement Use only values O -7 8 -9 reserved For LDT	Basic Engine 0 -4 49-state 5 -9 California	0 = Original 1 = 1st Revision 2 = 2nd Revision Etc.

Major Domestic Manufacturers' Light-Duty Truck Index Numbers:

LDT-NNN

	N	N	N
LDT - (For gas trucks) or LDDT- (For diesel trucks)	8-9	Displacement Basic Engine	Sales Class 0 -4 49-state 5 -9 California

All Other Manufacturers' Light-Duty Vehicle Index Numbers

LDV-ONN

	O	N	N
LDV- (For gas vehicles) LDDV- (For diesel vehicles)		Displacement Basic Engine Use only values O -7; 8 -9 reserved for LDT	Sales Class 0 -4 49-state 5 -9 California

All Other Manufacturers' Light-Duty Truck Index Numbers:

LDT -ONN		
O	N	N
LDT - (For gas trucks) LDDT - (For diesel trucks)	8-9	Basic Engine Sales Class 0 -4 49-state 5 -9 California

Enter this code on the Card 1 (e.g., LDV-010).

Some of the digits in the index number serve more than one purpose. For example, the digit that represents Basic Engine/Sales Class performs a dual function. This digit is assigned a value between 0 and 4 if it is a 49-state vehicle and a value between 5 and 9 if it is a California vehicle. Within these ranges the value assigned aids in identification of the basic engine. For example, 1 and 2 could identify turbocharged engines and diesels, respectively, within the 49-state sales. T,his information together with the displacement digit would allow general identification of the basic engine. The values for the displacement digit are assigned in increasing order, with the number one representing the smallest displacement. In the case of General Motors the displacement digit represents different Divisions (i.e., Chevrolet, Buick, etc.), and the remaining two digits signify Basic Engine/Sales Class.

The computer will use this information plus the manufacturer number to make a five-digit code which consists of the manufacturer number plus the last two digits of the index number. In the case of the major manufacturers the trailing zero of the manufacturer number is deleted and the remaining two-digits plus the full three-digit index number comprise the five-digit code. This five-digit code is also called the index number, but it is not the code entered on the Card 1.

Engine-Descriptors

Engine descriptors are used to provide additional information about the basic engine used in the model type beyond the number of cylinders, displacement and method of aspiration. Engine descriptors should be entered on the Card 1 with the first descriptor in column 50, the second in column 60, and the third in column 70. When entering engine descriptors the parentheses should also be entered starting in the first column of the field.

The available engine descriptors are listed below. Use all the descriptors that apply except use the California descriptor only in the situation where the manufacturer has both a 49-state and a 50-state basic engine which are not distinguished by displacement, number of cylinders, method of aspiration, or

another descriptor.

The order that the descriptors should appear on the Card 1 is the order that they are listed below.

Engine Descriptor	Explanation
(Guzzler)	All the model types in this index (except model types that are suppressed) are subject to the Gas Guzzler Tax (P.L. 95-618).
(Police)	Police Basic Engine and Separate Police Sales Projections
(M-ENG)	One of two 5.8L Ford truck engines
(W-ENG)	One of two 5.8L Ford truck engines
(GM-BUICK)	Engine produced by GM-Buick Motor Division
(GM-CHEV)	Engine produced by GM-Chevrolet Motor Division
(GM-OLDS)	Engine produced by GM-Oldsmobile Motor Division
(GM-PONT)	Engine produced by GM-Pontiac Motor Division
(CALIF)	Used on 49-state portion of 50-state family when the manufacturer also has a 49-state only basic engine with the same displacement, method of aspiration, and number of cylinders.

Engine Descriptor	Explanation
(FFS)	Feedback Fuel System. A system that controls air/fuel ratio by measuring exhaust gas oxygen.
(CAL)(FFS)	Engine having both CALIF and FFS descriptors enter this combined descriptor in a single field.
(DIESEL)	Diesel engine.
(ROTARY)	Rotary engine.
(MPFI)	Multi-point FI. Enter this descriptor only when the manufacturer is offering both single and multi-point FI in the same displacement, number of cylinders, and

	sales class.
(SPFI)	Single point FI. Enter this descriptor only when the manufacturer is offering both single and multi-point FI in the same displacement, number of cylinders, and sales class.
(TURBO)	Turbocharged engine.
(FFS,TRBO)	Turbocharged engine equipped with a FFS.
(DSL,TRBO)	Turbocharged diesel engine.
(VARIABLE)	Variable displacement engine.

Option for Manufacturer Self-Calculation of Label Values

For the present time, EPA intends to make routine audits of all manufacturers' self-calculated label values. To facilitate those audits, manufacturers who self-approve label values should submit all the information described in these instructions (Cards 1, 2, 4, 5, and 6) five days before the vehicles are offered for sale.

For the 1985 model year, the self-approval of label values is optional. Manufacturers not electing to self-approve label values do not need to submit the information requested on the "Manufacturer FE Calculation" (Card 2) format. All other information must supplied, however (Cards 1, 4, 5, and 6).

For manufacturers electing to approve their own label values and electronically
submit the information, a receipt for the labels plus the range for comparable vehicles will be issued by EPA. EPA is not considered in receipt of the infor-
mation until it is successfully entered into our computer data base. The receipt will be issued electronically in the manufacturer's report file (123GR-5).
If manufacturers are not electronically submitting their self-approved label values, the receipt can be obtained at the MVEL computer operation window once the computer forms have been correctly completed.

Date Vehicle Code (DVC)

The DVC is a three-digit code used to identify each unique vehicle configuration within an index and to link the information on the Card 4's and Card 5's (a particular tested configuration should have the same DVC on both Cards 4's and 5's).

Within an index, the Card 5's should be divided into separate vehicle configurations. All-entries that have the same displacement, transmission (Card 6), engine code, and axle ratio are grouped together. When making this grouping C4 (Creeper four-speed) and M3 transmission are considered identical. Each grouping will receive a unique DVC (within that index) according to the following restrictions:

DVC of 001 -499: A test vehicle represents some portion of this configuration.

DVC of 501 -999: No portion of this configuration is represented by a test vehicle.

The car line, equivalent test weight (ETW), and road-load horsepower (RLHP) may vary within a configuration, causing multiple cards within a DVC grouping.

If any of the ETW's or RLHP's within that configuration are tested, then the DVC is assigned a number between 001 and 499.

Once the DVC's have been assigned to the configuration groupings on the Card 5's, the same DVC is assigned to the analogous tested configuration on the Card 4's. It is possible to have more than one Card 4 with the same DVC, providing the vehicles match Card 5's in that DVC grouping.

When engine code equivalency has been granted by EPA, those equivalent engine codes should be treated as identical and they should receive the same DVC.

Road-Load Code (RLC)

The RLC is a two-digit code used to identify each unique subconfiguration within a configuration and to link the information on the Cards 4's and Card 5's (a particular tested subconfiguration should have the same RLC on both Cards 4's and 5's).

Within a configuration (DVC) the Card 5's should be further divided into separate vehicle subconfigurations. All entries that have the same ETW and RLHP within the DVC are grouped together. Each grouping will receive a unique RLC (within that configuration or DVC) according to the following restriction:

RLC of 01 -49 A test vehicle represents this subconfiguration, (it has the same ETW and RLHP).

RLC of 51 -99 This subconfiguration has no test vehicle representing it.

The car line may vary within a subconfiguration resulting in multiple cards with the same RLC. It is possible to have an untested RLC within a tested DVC if that ETW -RLHP combination has no data representing it.

Once the RLC's have been assigned to the Card 5's, the same RLC is assigned to the analogous tested subconfiguration on the Card 4's.

Suppression Codes

The supression codes are used to prevent recalculation of model type values and to prevent the printing of certain label values in the Gas Mileage Guide and to prevent inclusion of the vehicle on the test car list.

Suppression codes can be used on Card 4's (in field 77) and/or Card 5's (in field 73), depending on the type of suppression needed. The codes and uses are:

Code 1	Indicates high-altitude-only model type. This code, not used since the 1979 model year, was only entered on Card 5's.
Code 2	Used in response to a manufacturer's request of confidentiality. This code, used on all Cards 5's within the model type, suppresses printing of the model type label value in the Gas Mileage Guide. It could be used for a police-only model, for a model type not offered for sale immediately, or for a model type that may never be sold (a contingency plan). Explain the situation on the Comment card.
Code 5	Used on police-only basic engine's sales projection data (Card 5's) and test vehicles representing those sales (Card 4's). Refer to Advisory Circular No. 83A for the definition of police-only basic engines.
Code 9	This code, the most widely used, is entered on either Card 4's or Card 5's, depending on the specific case. It is used when information on the card has been previously used in a calculation as a data substituted vehicle version, or revision, etc. The following examples will help illustrate the applications of suppression code 9. 1. If a new model type is introduced part way through the model year, the general label calculations for it will often include data which were used in previous general label calculations (previous index). Tb pre-vent the previous label values from being recalculated as part of the new index and resulting in duplicate

entries in the Guide and Test Car List, a suppression code 9 is entered on all previously used Cards 4's and 5's in the new index. (Note that the new Card 5's in the new index may have different sales.) The label values for the new model will be calculated normally, while any existing label values will remained unchanged.

2. If a specific vehicle version is used as a data substitution for another vehicle, a second Card 4 must be made for the represented subconfiguration. A suppression code 9 is used on the second Card 4 to prevent the vehicle from being printed twice on the Test Car List. For example, if a vehicle is to be tested at both 5,000 lbs. and 4,500 lbs., the manufacturer can run a test for the vehicle at 5,000 lbs. and use these test results to represent the 4,500 lbs. vehicle also. The Card 5's would be entered for, say, the Ajax Wagon at 5,000 lbs. with DVC 001 and the Ajax Sedan at 4,500 lbs. with DVC 002. The respective Cards 4's would have DVC 001 at 5,000 lbs. with the test numbers, and a dummy Card 4 with DVC 002 at 4,500 lbs., the same test number(s), and a suppression code 9 in field 77. The suppression code in this case would prevent the same vehicle version from appearing twice on the Test Car List or in the Gas Mileage Guide. The same methods can be used for handling RLC's when substituting subconfigurations.

Comment Card

Each index should contain at least one Comment card. A Comment card is a special Card 4 that has three asterisks in the DVC field and is the first Card 4 in an index, up to 9 comment cards may be entered in each index. With the exclusion of the asterisks in columns 1 to 3 and the card number (4) in column 80, the balance of the card may be used for free-form comments.

The minimum required information on the comment card is a descriptor of the basic engine (displacement/fuel system/sales class/special descriptor, e.g., 350/FI/CAL/FFS) and mention of any engine code equivalencies or data substitutions. Other comments should be added to clarify the index.

Transmission Information (Card 6)

For most manufacturers, only a small number of transmission information cards (Card 6) will be required to be completed since a single Card 6 will be linked to multiple Card 5's. A separate Card 6 should be entered for each combination
of parameters listed on the card offered in that index.

Transmission Link Code

This code is used to link the transmission information (Card 6) with the manufacturer sales input information (Card 5). The code may be any numeric entry between 01 and 99 but must be uniquely assigned within the index.

Electronically Submitting Fuel Economy Data

Manufacturers are encouraged to electronically submit FE information. A computer account on the U of M MTS computer system is required to electronically transmit data, contact John Hendon for information about obtaining an account.

To electronically transmit data the manufacturer must create two computer files named 1236W-5 and 1236R-5 on the account. These files must be permitted with "Full" access to account "SAQR". Completed card images are placed in 1236W-6. The EPA computer program will process information in this file and empty it each evening. Error messages and receipts will be placed in 1236W-6. This file will not be emptied by EPA each day.

Recalculation of Label Values Due to Running Changes

Under the provision of 40 CFR 600.314-86 manufacturers will be required to relabel vehicles whenever a running change adds to a base level, adds an axle ratio which is 10 percent (or more) larger than the largest axle ratio tested, adds a road-load horsepower that is 10 percent (or more) larger than the certi-
fied road-load horsepower, or adds a larger equivalent test weight. The manufacturer may optionally comply with these provisions for the 1985 model year.

If the manufacturer elects to recalculate a label value due to a running change
then the following procedures should be followed.

1. The "Recalc" field should have a " ", the appropriate reason entered: 1, 2, 3, 4.

2. The "Relabel Option" field should be completed showing the manufacturer's contention to relabel with a higher FE value if the recalculated FE goes up by 1.0 mpg.

3. The index number used should be the index number of the index being relabeled.

4. The sales volumes should be revised.

5. All model types included in the original index (including model types which
will not need to be recalculated but are in overlapping base levels with model types that require recalculation) should be submitted in the recalculation index. Cards associated with both base levels and model types that are not part of the recalculation need not be resubmitted at the manufacturer's option.

6. Enter a suppression code 9 on all Card 5's that are associated with model types that will not be recalculated.

7. Enter the running change number which triggers the recalculation on a comment card.

The recalculation will result in relabeling if the new fuel economy for either the city or highway test cycle is 1.0 mpg or more lower or 1.0 mpg higher and the manufacturer has elected to relabel (enter "1" in Recalc field).

Reference File CD8406_1.PCX

Total Sales Card -Corporate Average FE

1 -2	CARD IDENT	"FS" as card identifier.
3 -4	MODEL YEAR	Enter applicable FE model year.
5 -7	MFR CODE	Enter 3-digit mfr code from the back of the Vehicle Information Data Sheet.
8	COMPLIANCE CATEGORY	1 for domestic passenger cars, 2 for Import Passenger, 3 for Domestic 2-wheel drive, 4 for Import 2-wheel drive, 5 for Domestic 4-wheel drive, 6 for Import 4-wheel drive, 7 for Domestic Combined Light Duty truck, 8 for Import Combined Light Duty truck.
9 -15	SALES	Total sales for the compliance category. Left justify

Reference files CD8406_2.PCX through CD840611.PCX

Example 1

SAMPLE PRODUCT OFFERING

Basic Engine	Engine Descriptor	Index No.
LDV		
1.4L, FI, FFS, 49S	(FFS)	LDV-010
1.4L, FI, FFS, 49S of 50S	(CAL)(FFS)	LDV-011
1.4L, FI, FFS, CAL of 50S	(FFS)	LDV-015
2.0L, 2V, TURBO, 49S	(TURBO)	LDV-020
2.0L, 2V, 49S of 50S		LDV-030
2.0L, 2.V, CAL of 50S		LDV-035
2.0L, DIESEL, 49S of 50S	(DIESEL)	LDDV-040
2.0L, DIESEL, CAL of 50S	(DIESEL)	LDDV-045
2.6L, FI, 49S	(FFS)	LDV-050
2.6L, FI, CALIF	(FFS)	LDV-055
LDT		
2.4L, 2V, FFS, 49S	(FFS)	LDT-080
2.4L, 2V, FFS, CALIF	(FFS)	LDT-085
3.0L, 2V, 49S		LDT-090

Example 2

This example shows how DVC and RLC numbers are assigned for a sample data base. A sample 01-31 report is the first following page. The second page shows the Card 1, 4, 5, and 6's that are associated with this sample data base.

Reference Files CD840612.PCX through CD840617.PCX

Example 7

This example is a recalculation of a previously approved label value due to the addition of a base level by a running change. This example uses the data base used in Example 2 as the before the running change basis. A new 01-31 report is used to determine test representation and updated sales projections are used.

Reference Files CD840618.PCX through CD840621.PCX